



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/770,616	02/02/2004	Wolfgang Eis	AMB-131-01	2302
24131	7590	10/06/2008		
LERNER GREENBERG STEMER LLP				
P O BOX 2480				
HOLLYWOOD, FL 33022-2480				
EXAMINER				
DEHGHAN, QUEENIE S				
ART UNIT		PAPER NUMBER		
1791				
MAIL DATE		DELIVERY MODE		
10/06/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/770,616  
Filing Date: February 02, 2004  
Appellant(s): EIS ET AL.

\_\_\_\_\_  
Mark P. Weichselbaum  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed August 1, 2008 appealing from the Office action mailed December 7, 2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

<b>3,847,579</b>	<b>FULK et al.</b>	<b>12-1974</b>
<b>3,650,717</b>	<b>CANFIELD</b>	<b>3-1972</b>

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 9, 14, 16-22, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Fulk et al. (3,847,579). Regarding claims 1-2, Fulk et al. disclose a device for making a plurality of fibers comprising:

- a. A multifiber drawing machine having a drawing installation configured for a drawing a plurality of fibers at a constant speed to form a bundle (col. 5 lines 15-36, figure 15, col. 1 lines 19-20),
- b. And a take-up winder with a take-up spool and a compensating device capable of compensating differences in speeds between the drawing installation and the take-up spool (col. 5 lines 15-36, figure 15),

- c. wherein the compensating device comprises a speed-change compensating device capable of compensating a change in speed in the fiber bundle due to a changing wound-up radius (col. 8 lines 26-44),
  - d. wherein the speed compensating device has a dancing arm fastened at a mounting point (where 210 and 220 meets, fig. 7), and a deflection roller (54) that is rotatably fastened to one side of the dancing arm and is pivotable about the mounting point in a plane substantially parallel to a plane of rotation of the take-up spool (col. 9 lines 20-36, col. 10 lines 54-59),
  - e. and the deflection roller on the dancing arm can oscillate separately with respect to the pivoting movement by force of the spring (58) (note the oscillating arrow in figure 7, col. 9 lines 37-40).
- 3. Regarding claim 3, Fulk et al. discloses a take-up winder with a fiber guiding unit (col. 7 lines 21-42).
- 4. Regarding claim 9, Fulk et al. discloses in figures 1 and 15 the deflection roller with an axis of rotation parallel to the axis of rotation of the take up spool.
- 5. Regarding claim 14, Fulk et al. disclose an angular resolver, wherein the dancing arm is assigned to the angular resolver at the mounting point, and a speed controller connected to the angular resolver for controlling the rate of the take-up spool (col. 9 lines 50-65).
- 6. Regarding claims 16-21, Fulk et al. disclose a compensating force, such as a hydraulic cylinder, that is capable of adjusting the dancing arm to an equilibrium or

neutral position and also capable of setting a tension in the fiber bundle (col. 11 lines 1-50, col. 12 lines 50-56, col. 3 lines 34-36).

7. Regarding claim 22, Fulk et al. disclose a take-up spool that is fastened as an exchangeable take-up spool (col. 14 lines 25-27, 50-52).

8. Regarding claim 26, Fulk et al. disclose a drawing installation capable of producing a plurality of individual multicomponent fibers (figures 1, 2 & 15).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fulk et al. (3,847,579), as applied to claim 3 above, in view of Collaro (2005/0126227). Fulk et al. disclose a fiber guiding unit with a controllable excursion mechanism (82) that acts on a fiber guide (88) for laying the fiber bundle on the spool (col. 7 lines 21-43). However, Fulk et al. fail to disclose a guiding roller. Collaro teaches a device for drawing and winding fiber onto a reel, comprising a guiding roller for guiding the fiber onto the reel ([0097], figure 4). Collaro also mentions that any other pulleys or guiding elements of another type may be used ([0099]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the guiding roller of Collaro in the fiber guiding unit of Fulk et al. because Collaro has demonstrated that it is known in the art to do so and because it would allow for smooth guiding means for the fiber.

12. Claims 5-6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fulk et al. (3,847,579) in view of Collaro (2005/0126227), in further view of Hendrix et al. (4,130,248). Regarding claims 5 and 6, although Fulk et al. and Collaro both disclose an excursion mechanism for traverse of the fiber guiding unit and a guiding roller, as similar discussed above in claim 4, they fail to disclose a layer compensating device. Hendrix et al. teach a take-up winder (42) comprising a layer-compensating device, which is capable of adapting to a winding condition based on a change in a wound-up radius on the spool. Furthermore, the layer compensating device has a controllable excursion mechanism capable of controlling traveling of the fiber guide in a direction radial with respect to the axis of rotation of the spool, based on the number of layers on the spool (col. 3 lines 48-64, col. 4 lines 7-29). It would have been obvious to

one of ordinary skill in the art at the time the invention was made to utilize the layer compensating device with the excursion mechanism in the take-up winder of Fulk et al. and Collaro in order to allow for the fiber guiding unit to accommodate for an increase radius of the wound spool during winding operations.

13. Regarding claim 15, Fulk et al. disclose a central data processing unit (controller) capable of controlling the compensating device for differences in speeds (col. 9 lines 1-12, 59-64).

14. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fulk et al. (3,847,579), as applied to claim 1 above, in view of Canfield (3,650,717). Fulk et al. disclose a speed-change compensating device with a dancing arm with a deflection roller, wherein the dancing arm is fastened at a mounting point, as mentioned above. Furthermore, Fulk et al. indicates oscillating the dancing arm in a clockwise motion, as discussed above (col. 9 lines 37-38), but fail to disclose an elastic dancing arm. Canfield also teaches a speed-change compensating device (col. 7 lines 68-72), with a dancing arm (50) fastened at a mounting point (53) and a deflection roller rotatably mounted on the dancing arm and is flexible about the mounting point in a plane parallel to the plane of rotation of the spool (col. 3 lines 45-75). Furthermore, Canfield teaches in figures 1 and 3 a deflection roller and take-up spool with axes of rotation that are parallel to one another. Also, Canfield teaches a dancing arm that is elastic, with a long and thin shape, and plastic, allowing for the deflection roller to have oscillating capability (col. 4 lines 1-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the variation in the a speed-



change compensating device, especially the use of an elastic material, as suggested by Canfield in the apparatus of Fulk et al, in order to provide for proper tension on the fiber and a dancing arm that can withstand the strain due to the tension.

15. Claim 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fulk et al. (3,847,579), as applied to claim 3 above, in view of Stream et al. (2,622,810). Fulk et al. disclose a take-up spool that is capable of being exchanged when full (col. 14 lines 25-27, 50-52). Stream teaches a winding apparatus comprising a replacement spool located axially adjacent the take-up spool, a fiber guiding unit traveling over the replacement spool for laying the fiber bundle on the replacement spool when the take-up spool is full, and a removable take-up spool (col. 6, figures 8-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize such a replacement spool arrangement of Stream et al. in the apparatus of Fulk et al. in order to facilitate easy and continuous winding of the fiber bundle. Furthermore, Fulk et al. disclose a central data processing unit (controller) capable of controlling a rotationally speed of the replacement spool via the compensating device (col. 9 lines 59-64). It would have been obvious to one ordinary skill in the art at the time the invention was made to expect central data processing unit to control the rotational speed of the spool (replacement or take-up) via any desired control loop (via closed-loop or open-loop), especially since Fulk et al. has disclosed its capability to control the spooling speed.

**(10) Response to Argument**

**Claims 1 - 3, 9, 14, 16- 22, and 26 are not anticipated by Fulk et al. under 35**

**U.S.C. § 102**

In the appellant's arguments filed August 1, 2008, the appellant argues the arms 220 and 210 in the Fulk reference do no impart a movement to the roller 54 that is separate from the movement about the shaft 182. More specifically, the appellant argues the arms 210 and 220 are pivotally connected together, this pivotal connection does not enable the shaft 182 to perform a horizontal movement, a vertical movement, or some other type of translational movement because the arms are fixed to the shaft 182. The appellant also adds the pivoting movement between arms 210 and 220 does not cause any pivoting or oscillation of the roller 54, but rather only serve to dampen the jerked movement of the roller 54 about the shaft 182.

In response, the Examiner would like to reiterate the claimed limitation in question. The portion of claim 1 in question recites "the deflection roller held on said dancing arm such that said deflection roller, in addition to performing a pivoting movement about the mounting point of said dancing arm, can oscillate separately with respect to the pivoting movement". When broadly read, the claim does not require a separate movement that is horizontal, vertical or translational in any way. In fact, the claim does not require a pivoting movement and oscillating movement to be different movements, but instead that the pivoting movement and oscillating movement be separate with respect to each other. Furthermore, according to the specification and drawing (page 37 lines 11-21; figure 1), both the pivoting movement and oscillating

movement of roller 13 are essentially the same movement, that is a counterclockwise and clockwise movement. In regards to the Fulk reference, Fulk teaches an oscillating movement of the roller 54 that is generated by the spring 58. Fulk also teaches a pivoting movement of roller 54 about the point intercepted by arms 210 and 220. That is, arm 210 creates a pivoting movement of arm 220, which in turns rotates shaft 182 and essentially pivots the connecting dancing arm 56 and roller 54. Hence, the oscillating movement and pivoting movement of Fulk are separate relative to each other and are generated by separate means.

The appellant adds the arms 210 and 220 only serves to dampen the jerked movement of the roller 54 and does not cause any pivoting or oscillation of roller 54. As explained by the appellant, a sudden jerk downwards of roller 54 creates a counterclockwise rotation about shaft 182. The dampening force in response to roller 54 that has been jerked downwards is an opposition to the rotation of the shaft 182. This opposition force is essentially a rotation of shaft 182 in the clockwise direction, in order to counter the counterclockwise rotation. Therefore, the dampening motion does cause pivoting of the roller 54 in the opposite direction.

**Claims 11 - 13 are not obvious over Fulk et al. in view of Canfield under 35**

**U.S.C. § 103**

Regarding claims 11-13, the appellant argues the feasibility of utilizing an elastic material in the apparatus of Fulk and the combination of two different types of sensing structure having an equivalent functionality. The sensing structure of Fulk has two features including an oscillating movement generated by spring 58 for the relatively

smaller adjustments to the bouncing movements of roller 54 and a pivoting movement generated by arms 220 and 210 for the sudden and relatively larger movements of roller 54. The oscillating/bouncing movements of roller 54 countered by the spring 58 senses the tension in the fiber. Canfield presents a similar concept wherein the flexible arm essentially oscillates or bounces and also senses the tension in the fiber. As mentioned by the appellant, the two sensing structure would appear to have equivalent functionality. Since the bouncing movement of the roller/arm/spring assembly of Fulk is similar to the bouncing movements of the flexible arm/roller assembly of Canfield, it would be obvious to replace one known equivalent for another since they satisfy the same functionality and capability.

The appellant also points to an examiner argument that the elastic material provides proper tension on the fiber. The examiner did not allege the elastic material provides proper tension on the fiber. On the contrary, the examiner stated the speed-change compensating device as suggested by Canfield provides for proper tension on the fiber. The speed change compensating device of Canfield comprises a flexible arm with two strain gauges that provides a signal for the control of the rotational speed of the collet which keeps a constant tension on the fiber. This is essentially the same function as sensing device of Fulk and hence an equal substitution.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,  
  
/Queenie Dehghan/

Conferees:

Steven Griffin

/Steven P. Griffin/

Supervisory Patent Examiner, Art Unit 1791

/Christopher A. Fiorilla/

Chris Fiorilla

Supervisory Patent Examiner, Art Unit 1700